

# BAROMETER TO TELL OF STOCK MARKET'S FUTURE

James H. Brookmire Has Worked Out a Chart Which He Believes Forecasts the Business Future

JAMES H. BROOKMIRE of St. Louis, who has devised a composite barometer and barometer of fundamental conditions from which he believes he can forecast stock market conditions, is in the city explaining his chart to bankers and brokers. He consented the other day to explain to THE SUN the way in which he became interested in the subject and how he has developed his idea.

For several years prior to 1904 Mr. Brookmire was the general manager of a manufacturing concern in St. Louis. Early in that year he became a partner in a banking firm that had a New York Stock Exchange membership. Then for the first time he got an insight into the stock market.

"I soon noticed that most of the men buying and selling stocks were trading simply on unsupported ideas, or tips, or on information which even though it might be correct was not important enough to justify backing with hard earned money," said Mr. Brookmire. "It wasn't hard to see that invariably these so-called speculators were really gamblers, whether they knew it or not, and the result was usually disastrous."

politics and banking conditions invariably must be favorable before a period of prosperity, the presence of one unfavorable factor, that of an overextended banking condition, overcame all favorable factors. This condition necessitated liquidation in securities first, and then about a year later came the inevitable depression in business.

"Many people still believe that it is impossible accurately to forecast the future in business, as well as the probable prices of securities, since there are so many factors to produce puzzling complications. While it is not at all difficult to prove the direct influence which some individual factors are certain to have on the security market and business conditions, I have found that a definite result can be obtained by combining these definite business factors: bank clearings, not alone in New York city but in the entire nation, railroad earnings, pig iron production and prices, imports and exports, immigration, building construction statistics, and the average commodity prices. I combine them into an index which gives a more accurate and satisfactory guide than I could have had from any one business factor."

In order to make an accurate comparison of the earnings must be adjusted with the other months, so that February, which is normally the poorest month, will be adjusted to a common level with the other months. In this way, with the seasonal fluctuations eliminated, the course of the composite will indicate accurately the tendency toward prosperity or toward depression.

When asked how he worked out his composite chart without using a "line of growth," which is a feature of other methods of forecasting movements, Mr. Brookmire said:

"I found out years ago that the factors that have to be weighted require separate adjustment. For instance, the normal increase in bank clearings and railroad earnings is by no means the same, while other factors, such as money rates and pig iron prices, require no weighting at all. If I made up my figures, even allowing for seasonal variations, and then tried to place a so-called 'line of growth,' I would have a chart of little value. It would be impossible to get any 'line of growth' compensating for factors which increase at different ratios, and attempting to compensate for such factors as money rates and pig iron prices, which mean the same now as they did ten years ago."

"Now here is another point, and I can't emphasize it too much. I want you to notice carefully I have used separate business and banking indices. It is the relation between the business and the banking indices that tells the story. The money that the stock market and

called, and the house of cards just naturally collapsed.

**Start and End of Panics.**

"Early in February I decided that the year of 1907 was bound to be a year of drastic liquidation. Before I made public my views I came to New York and talked with bankers, and found my opinion verified. The wisdom of the speculative boom in stocks and business, together with an overextended banking situation, had made it seem clear to me that a collapse was bound to come; but so few people believed it possible that I wanted to see what others who followed conditions believed. I went back to St. Louis and sent out a letter stating the reasons why I believed every one should put his house in order and be prepared for what was going to happen. You know what did happen."

"Can you forecast the beginning or end of a panic?" Mr. Brookmire was asked. "No one can actually tell when there will be a real panic," he replied. "We can tell when there will be drastic liquidation, but this liquidation does not always culminate in a real panic. Special causes, such as the runs on two great trust companies, with the circumstances that brought about these runs, contributed to the panic of 1907. We had fairly drastic liquidation in 1910, but no panic."

"As to stopping a panic, stocks will keep on going down when there are adverse conditions until these conditions change, no matter how low the prices may drop, just as they will keep on going up

months after the stock market starts upward.

"You will notice that the three factors necessary before improvement was possible were indicated in a very pronounced way in 1904 and 1905. You will observe, by following these conditions on the chart, that there was a rapid rise in the security market followed by decided improvement in general business."

**As to Crops and Politics.**

In explaining why he did not include crops and the political situation on his chart of fundamentals, although holding that they have a great influence on business and security prices, Mr. Brookmire said, "It is simply impossible to chart political influences, and it is impracticable to chart crops. The influence of crops is sometimes entirely contrary to what may be expected."

"For instance, in the fall of 1906 the enormous crops simply stimulated the optimism of the nation at a time when business and credit were already in a feverish and over extended condition. The additional credit required to move these crops and to handle the increased business was an additional burden which the banks were not able to carry. We have to consider crops and politics separately in relation to bank and business conditions and the security market, making deductions as the facts warrant."

"With the fact established that the three prime factors, crops, politics and banking conditions, must be favorable before there is an expansion in business,

Crop, Political and Banking Conditions Foretell Prosperity in Four Year Stock Market Run Cycles

On the subject of improvement Mr. Brookmire said:

"Following each panic and depression with its liquidation in business you will find a low level of prices and a stagnant security market. Deposits in the banks and trust companies will be large, and the amount of loans will be small in proportion to the amount of deposits. Interest rates will be very low. Iron and copper prices will be much depressed. Just as soon as there is a favorable crop condition and a favorable political situation the three prime factors necessary for improvement will be favorable."

**The Investor's Opportunity.**

"The stock market, perhaps already slightly advanced, starts upward, discounting the future prosperity, and as the stock market advances it becomes more active. Business starts to improve, railroad earnings increase, metal prices advance, and there is an increased demand for bank credit."

"There is a seasonal increase in the price of stocks coincident with public buying and great activity. The length of time the market has been advancing, the extent of the advance and the time

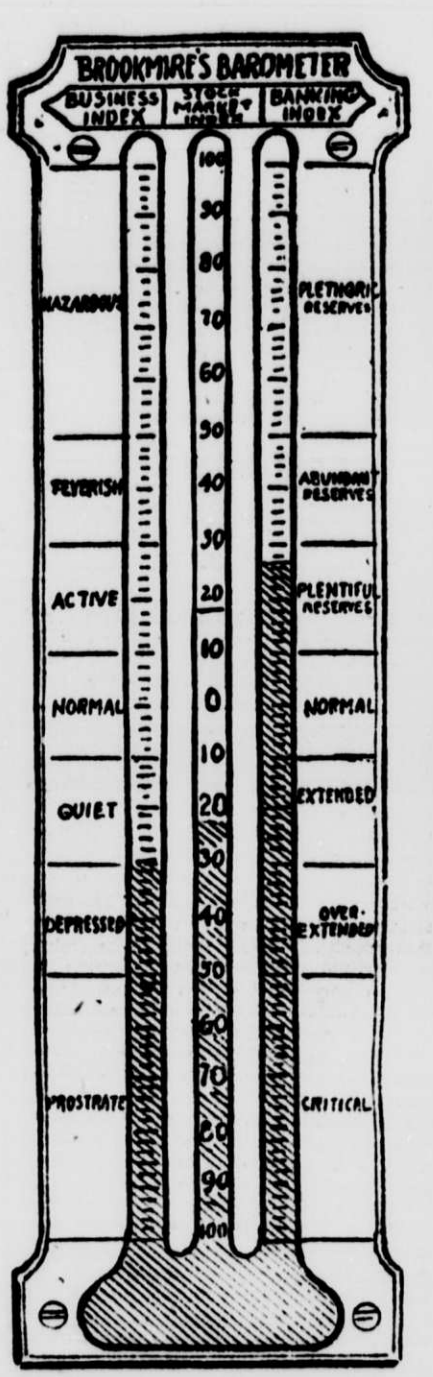
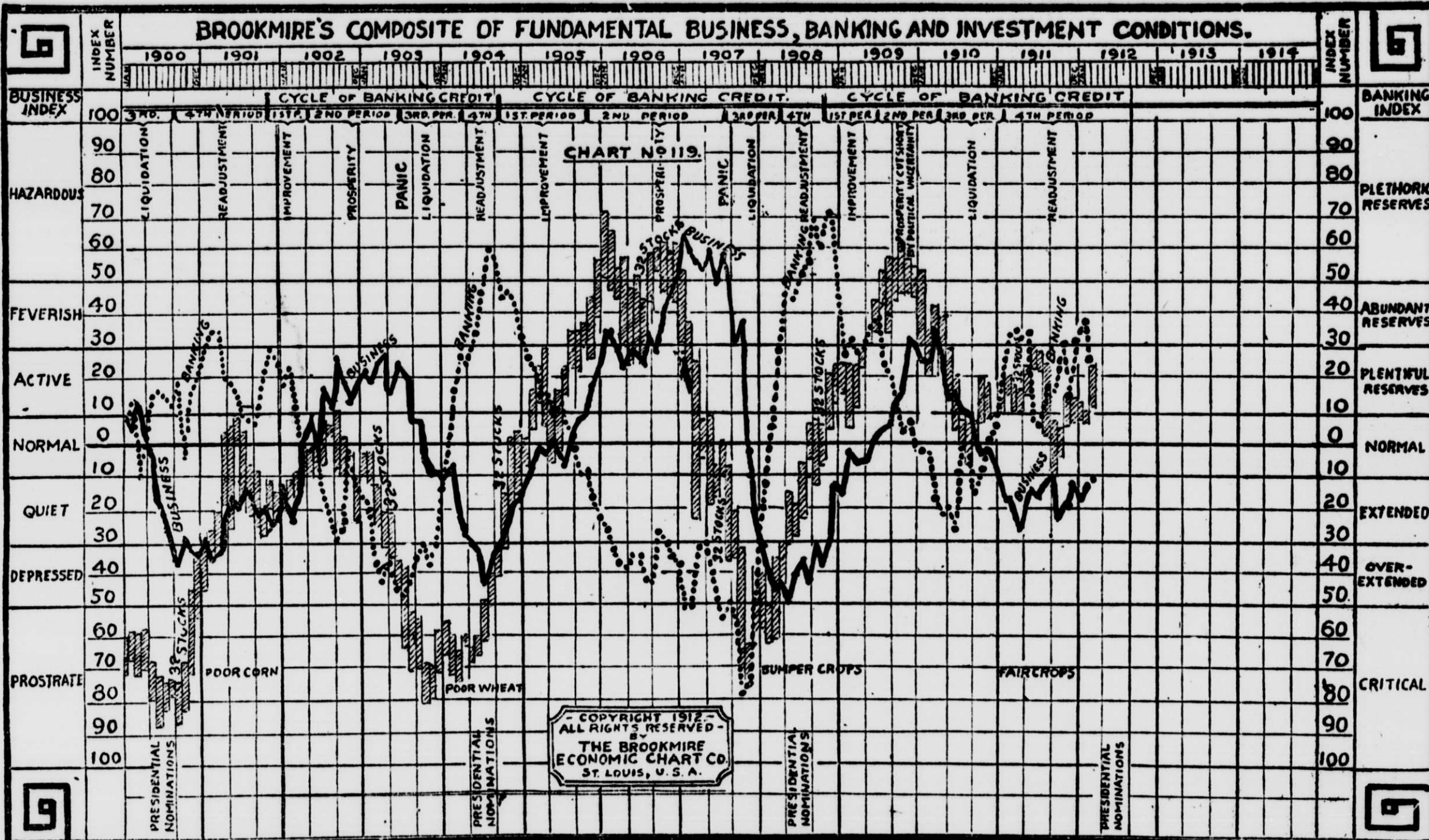
"The following period of liquidation lasts from four and one-half to fifteen months, a period of great danger to the investors and business men. Decline in the security market is violent and persistent; not infrequently a panic period with downward course of market values. At the beginning of this third period of security liquidation business still continues high for almost a year but as old loans are called in and new ones refused prices finally start on a downward slide."

"After a little the markets in many lines, for example iron and copper, become demoralized. Weaker firms in all lines suspend and the dividends of many of the more prosperous companies are lowered or suspended. There are always failures of importance."

"At the end of this period there will be heavy selling of stocks, but also buying by shrewd odd lot investors. The last part of 1902, the first half of 1903, the year of 1907 and the first half of 1909 were such years of liquidation."

**The Present Outlook.**

"The fourth period of the cycle lasts from eight to twenty months. Business



"I became convinced that the decided changes in the security market could not be the result of the manipulation of a few insiders, but that they were caused by underlying conditions. Of course, the market was manipulated occasionally, but I observed that the successful manipulation had to be along lines of least resistance. That is in conformity with the rule as indicated by business and banking conditions, of which I will give you an example presently."

"There isn't anything new about forecasting business and financial conditions that can be relied upon. I discovered, moreover, that such forecasting as has been done in the past was the work of men of practical affairs and based upon conditions of crops, the political situation and their actual experience. Economists have proved that many factors which are of great importance often, dominant in determining the course of general business and the securities market, were not understood and considered by the average person."

"In studying all these factors I was surprised to see how accurately leading economists, such as the French economist Juglar, had outlined the conditions under which prosperity will surely follow, and the converse of which will just as certainly cause a period of drastic liquidation and probable panic. The economists had not gone much beyond the realm of theory, and I had to get the statistics for different periods, and for enough years, and then study actual conditions to see whether the theories held good in every instance."

"Then I took these leading banking factors: loans, deposits, specie, reserve, the percentage of reserve to deposits, the rate of commercial paper and the ratio of reserve to loans, and put them into a combined index with the same advantage as with the business index as a guide. When I placed the business and banking indices together on a chart with the stock market record, I had a true chart of fundamentals, which you will see by the chart illustrated works out in a surprisingly accurate way."

When asked if he made any allowance for the growth of the country in plotting his indices, Mr. Brookmire said he had found it necessary to make such allowances in regard to certain factors, such as railroad earnings, bank clearings and pig iron production.

**Commerce and Banking.**

"For example," said Mr. Brookmire, "railroad earnings have increased at the rate of about 4 per cent. a year normally, but it was necessary to get the average yearly record over the period studied. This average yearly earnings is represented at zero on the chart. Then we take the earnings by months, and weight them to allow for seasonal variations."

"Without exception October is always the record month for railroad earnings."

general business use comes out of the banks, and stocks and business go up the other months, so that February, which is normally the poorest month, will be adjusted to a common level with the other months. In this way, with the seasonal fluctuations eliminated, the course of the composite will indicate accurately the tendency toward prosperity or toward depression."

"After the panic the banks and trust companies filled up with money, but business kept right on dropping after it got started on the down grade. Business always follows the stock market, but business men as a whole will not believe that drastic liquidation in the market can affect them personally, and since people are always most enthusiastic when prosperous they make contracts which keep business going after the stock market bubble has burst. When business does get started down for a depression it stays down until after the market starts upward, as you know."

"People are afraid to put their money into business or into securities. They put it into the banks and then conditions become favorable for a rise in stocks sooner or later. Just as soon as the banks are in good shape again, the crop condition favorable and the political situation cleared the market is in line for a certain rise and business will follow closely. While business does not start downward for about a year after stocks begin to slide we find that business always starts a good improvement within six

and studying closely the course of business and the prices of securities, I noticed that these movements came in clearly defined cycles. Then I began to apply the old cycle theory to these movements."

"I found that these cycles in no instance ran longer than four years. I considered each stock market cycle as the period between the beginning of the upward movement in stocks and the end of the low level following. The business cycle simply begins and ends later in each case than does the stock market cycle. Since 1883 there have been seven financial and business cycles."

Mr. Brookmire said that there are two causes contributing to fix the stock market cycle within four years. One is the Presidential election and the other is the fact that the development of the country is so rapid and the natural wealth so great that within three years from the beginning of a prosperous period there is a state of overexpansion of credit that makes liquidation of securities necessary. The four parts of this cycle as divided by Mr. Brookmire are improvement, prosperity, liquidation and readjustment. The parts are all clearly defined, although the time required to pass from one to the other of these parts cannot be fixed arbitrarily. It depends upon how rapidly conditions develop."

of the year also assist in determining when the end of this period has been reached.

"The great opportunity for the investor will be found in the first period of the upward movement of the cycle. In this period stocks advance from 45 to 85 per cent, and sometimes more of the total advance made during the entire cycle. This first period has not occupied more than seven months of any of the cycles."

The second period of the stock market prosperity, which lasts from five to twenty-four months, usually carries stocks to a still higher level, but under less favorable conditions stocks may show a gradual decline. During this period stocks may be purchased with care. As business expands, deposits and reserves decline and the proportion of loans to deposits increases. Interest rates for both short and long time money advance. Pig iron and copper prices rise rapidly to unreasonable figures.

"Business in all lines becomes feverishly active and general commodity prices reach high levels. Imports and exports increase greatly, with imports increasing more than the exports. In the last part of 1901 and the first half of 1902, in 1905 and 1906, and in 1907 we had the periods of prosperity in the stock market cycle."

is thoroughly liquidated, the banks become unusually strong, but there are many failures. After a general readjustment of prices to conditions, the country simply waits for crops and a political situation to be favorable. Then with the banking conditions good the new cycle starts in. These movements are thoroughly indicated on the chart."

Questions as to whether a great disaster such as the San Francisco earthquake would not disturb the indications of the chart, Mr. Brookmire said:

"All we can do is to discount normal conditions. If such a disaster occurs when other conditions are found, this accidental development would have but a temporary effect. Following both the San Francisco earthquake and the Northern Pacific panic, the stock market was higher than ever within a short time."

As to the present indications of the chart, Mr. Brookmire said:

"The situation as shown by the chart above proves that business has been in liquidation and has been readjusting itself to new political conditions since early in 1910. Business is thoroughly liquidated and ready to respond to any favorable developments, and it would also withstand with stubbornness any adverse developments which may reasonably be expected."

"The banking situation is satisfactory. The banks are in a position to meet the needs of normal expansion in business, as shown by the barometers at the side of the chart. This barometer shows the position of the business security and banking indices at the end of March. The combined chart and barometer show clearly the actual positions of the three graphs at any particular time."

"We still have decided uncertainty as to the two other factors which must be favorable before a sustained advance can possibly come about—crops and politics. Neither crops nor politics conditions are sufficiently advanced at the present time to justify a prediction."

"In the case of crops the conditions today are favorable owing to the satisfactory condition of the soil, as moisture is the first essential and good crops normally follow soil saturation such as we have this spring. We should assume until there is a definite indication to the contrary that the results of this year's harvest will be satisfactory."

"As May and June are always months of irregularity and of uncertainty, especially in Presidential years, it would be a good plan to await the results of the national conventions and the July crop reports before becoming too enthusiastic as to the immediate future. When we have a clear idea as to the crops and political situation there will still be time to prepare for the upswing in the stock market and the business expansion which would certainly follow if they are favorable."

## NEW GRAND CENTRAL AN ENGINEERING MARVEL

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of several novel features in train dispatching.

Instead of arriving trains backing out after discharging passengers, as was done under the old system, the empty trains will continue around a loop and swing over to the yards at one side, which are located far below the street level. Outgoing trains will be backed onto the tracks after leaving the yard.

Electrical operation will have much to do with the easy handling of trains. An all electric signal system is to be installed which will include the latest devices for disposing of either outgoing or incoming trains.

**Comforts for Passengers.**

All train gates are to be operated by electricity and their opening and closing signalled automatically. Passengers will be notified by electrically operated signals and announcers when trains are to leave or arrive.

Baggage will be handled on electrically operated elevators. Outgoing or incoming passengers, after leaving their homes

or hotels, need not see their baggage until they arrive at their destination, while in the case of passengers arriving their baggage too will need no attention until it is delivered at their residences or elsewhere.

Exits and entrances to the terminal have been planned with great care. The architects assumed that on frequent occasions, especially on days when travel is particularly heavy, the crowds might spread out on either side of the entrances to the concourses or waiting rooms to the distance of perhaps a hundred feet. Basing their calculations on this, the exits and entrances were placed the nearest to the exits and the furthest from the exits, the latter of course being at locations where it is least likely they will be required.

An innovation which will be particularly acceptable to outgoing or incoming passengers, are a number of small dressing rooms where a man or a woman may change his or her clothing immediately upon reaching the terminal. This will avoid the necessity of engaging a room in a hotel.

In addition there will be rest rooms

for women and also an emergency hospital, with doctors and nurses in constant attendance, where persons taken suddenly ill or who may arrive on incoming trains and need immediate medical attention can be cared for without delay. Those seriously ill can be taken direct from the train to a waiting ambulance without the fact coming to the notice of the public.

Public laborers and immigrants, who it may be thought advisable should not leave or arrive at the terminal through the main waiting rooms or concourses, will be provided for in separate waiting rooms and looked after by special attendants.

The Biltmore Hotel, which is to be built by the New York Central and New Haven companies, is to be one of the finest in the world. Occupying the block bounded by Madison and Vanderbilt avenues, Forty-third and Forty-fourth streets, and towering twenty-four stories high, it is to be part of the extensive scheme for covering the terminal yards with mammoth buildings. It will not be directly over the tracks, as in the case of many other buildings provided for in the general plan, but will face the new

station and be connected directly with it by underground passages. The five floors below the street level are to be devoted to store purposes. The hotel proper is to have 1,000 rooms and will accommodate 1,200 guests.

Passengers arriving at or departing from the hotel may proceed directly to the terminal without passing through the streets. Their baggage, too, may be taken directly to or from their rooms to trains without needing the attention of guests.

A new feature in hotel structure is the location of the ballroom and banquet hall on the twenty-third floor. High windows will be provided on three sides, so that in summer the rooms may be converted into open air roof gardens for diners and others. Here, far above the street level, and well above the roofs of neighboring buildings, they will have the benefit not only of any cool breeze that may be blowing in hot weather but a magnificent, sweeping view of the city proper, of Long Island, the Sound, the Connecticut shore and of part of Westchester county.

There is to be a Turkish bath establish-

ment on one of the lower floors, which is to have one of the largest indoor plunges in the United States. Separate accommodations are to be arranged for each class of the hotel's employees. Parlors will be provided for them where they may meet each other or their friends when not on duty.

The project of building a smaller and more moderate price hotel on the plot east of the terminal headhouse, fronting on Forty-second street and extending from Depue place to Lexington avenue, has been abandoned for the present, but may receive further consideration later.

**Starving Out Troublesome Pigeons.**

From the Philadelphia Public Ledger.

City hall pigeons are once more under the ban, and Director Porter is the man who is trying to get rid of them. Instead of attempting to do this, as Mayor Reuben says, by putting up wire fences upon the pigeon roosts, the Director has tried the starvation plan upon the flocks.

He has issued orders to the city hall guards to stop all persons from feeding the birds in the courtyard and on the northeast plaza and to arrest those who persist in throwing corn, peas, cake and bread to them.

There is to be a Turkish bath establish-